REMARKS/ARGUMENTS

Claims 1-10 are pending in this Application.

Claim 6 has been amended to clarify the language of one of its elements; no new matter has been added.

Claims 1-10 had been rejected under 35 U.S.C. §102(e) over Garakani et al. (US Patent Application Publication No. 2003/0185450 A1). This rejection is respectfully traversed for the following reasons.

It is well established that a claim is anticipated under 35 U.S.C. §102, only if each and every element of the claim is found in a single prior art reference.[1] Moreover, to anticipate a claim under 35 U.S.C. §102, a single source must contain each and every element of the claim "arranged as in the claim."[2,3] Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference.[4] If each and every element of a claim is not found in a single reference, there can be no anticipation.

Claim 1 comprises user defining virtual reference subjects within acquired images in order to define regions.

A virtual reference subject of Claim 1 is a location or a group of locations in an image or a sequence of images, see, for example, paragraphs [0035], [0037], [0039], and [0040] of the Specification.

Regions of Claim 1 are locations within images; see, for example, paragraphs [0036] and [0038] of the Specification.

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[1] Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).
[2] Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984).
[3] Lewmar Marine Inc. v. Barient, Inc., 827 F.2d 744, 747, 3 U.S.P.Q. 2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988).
[4] Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

On page 3 of the pending Office Action, the Examiner states that user defining virtual reference subjects is described in Garakani's paragraph [0178]. The Garakani's paragraph [0178] in its entirety reads:

"In some embodiments, a set of user preferences can be used to specify how many sequential watershed frames identify a watershed event. For instance, in certain dynamic processes, a user might be interested in frames corresponding to events taking place in a very small number of frames. Such preferences could be established in units of time, frames or any other relevant metric."

The above paragraph refers to user choosing frames (i.e. images) on the basis on what is happening in the frames; this paragraph has nothing to do with user defining any locations within images.

Applicants respectfully point out that the word "place", which the Examiner emphasized is a part of the phrase "events taking place", which does not refer to any place in the spatial sense.

On page 3 of the pending Office Action, the Examiner states that user making choices of locations in order to define regions is described in Garakani's paragraph [0187]. The Garakani's paragraph [0187] in its entirety reads:

"Objects in images and frames can be defined and located using a wide range of their features. However, robust and accurate localization of objects is most likely when using features that are the most invariant to predictable and unpredictable changes in the object, its proximate surroundings, and the broader environment. If the objects are rigid bodies undergoing rigid transformation, one could assume conservation of brightness, and use brightness as a defining feature to locate objects. In many situations, however, this is not the case. In biological applications, for example, objects are deformable, undergo morphological transformations, and float in fluid or crawl along the surface of culture dishes among other changes. In some embodiments, the present invention provides algorithms that detect such motion patterns to define objects."

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The above paragraph refers to an algorithm locating objects within images, not to a user making choices of locations in order to define regions.

On page 5 of the pending Office Action, the Examiner states that user making choices of locations in order to define regions is described in Garakani's Fig. 1, numerals 106, 107, and 108. However, all that is shown in Fig. 1 is a set of frames, each frame containing two dark spots, representing two dark spots in the specimen 101. There is no indication anywhere that these dark spots are chosen in any way for any purpose by anyone. Numeral 107, in particular, is defined in paragraph [0111] of Garakani as "the output of the sensor", i.e. the entire image. The frame's content is identical to the specimen's content.

Examiner equates virtual reference subjects of Claim 1 and "window size" in paragraph [0184], line 4 of Garakani (see the pending Office Action, page 7, second paragraph from the top).

However, paragraph [0184], lines 3-4, of Garakani actually discusses "attention window size", which is defined as the length of a frame sequence (paragraph [0117] of Garakani).

In other words, the term "window size" in Garakani refers to a length of a sequence of frames, as opposed to term "virtual reference subject" of Claim 1, which refers to a location or a group of locations in an image or a sequence of images.

Therefore, the element of user defining virtual reference subjects and defining regions of Claim 1 is absent in Garakani.

The elements of user defining virtual reference subjects within acquired images in order to define regions; of applying the identified optical flux to the defined reference subjects; and of performing interactions on the reference subject modified by the optical flux of Claim 1 are not taught or suggested in Garakani. Therefore, Claim 1 is patentable over Garakani under 35 U.S.C. §102(e) and should be allowed.

The above-presented argument also supports patentability of Claims 2-5. Allowance of the referenced Claims is respectfully solicited.

Amended Claim 6 comprises means for user to interactively define virtual reference subjects on the image shown on the display using the input unit for position definition.

For the reasons presented hereinabove, the element of means for user to interactively define virtual reference subjects on the image shown on the display using the input unit for position definition of Claim 6 is not taught or suggested in Garakani. Therefore, Claim 6 is patentable over Garakani under 35 U.S.C. §102(e) and should be allowed.

The above-presented argument also supports patentability of Claims 7-10. Allowance of the referenced Claims is respectfully solicited.

It is believed that the present application is in condition for allowance. A Notice of Allowance is respectfully solicited in this case. Should any questions arise, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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